



Greensburg Wind Farm

Kansas Wind & Renewable
Energy Conference
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Janie Hanson
Business Development Manager
John Deere Wind Energy



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172 Years of Rural Heritage

John Deere Worldwide

- Agriculture & Turf Care
- Construction & Forestry
- Financial Services -
 - Credit, Renewables, JDRP

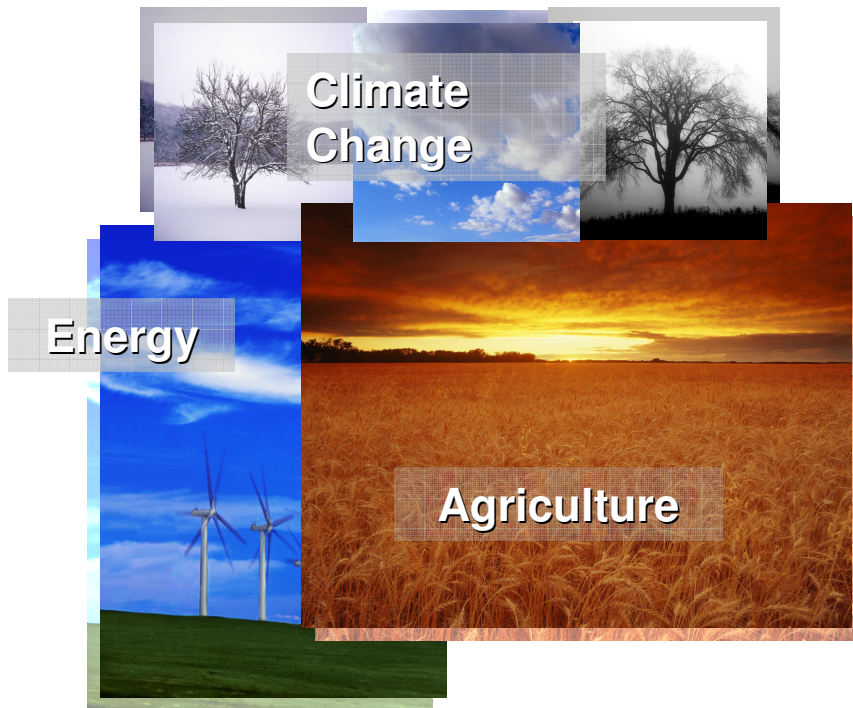
2008 Net Sales & Revenues \$28.43B

52,000 Employees



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Vision & Market Assessment



*... serving those who are
close to the land*

Renewable energy will be significant growth industry

Most renewable energy will be developed in conjunction with Deere's customers – farmers, landowners, & forest managers

Deere brand is trusted and provides credibility in rural America

Deere has the financial strength to execute – we do what we say we will do



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John Deere Wind Energy

A business unit of John Deere Renewables & Deere & Co.

- Development and Financial Services focus – no manufacturing role
- Commitment to Ag energy & rural economic growth
- Portfolio of 734 MW in 36 projects

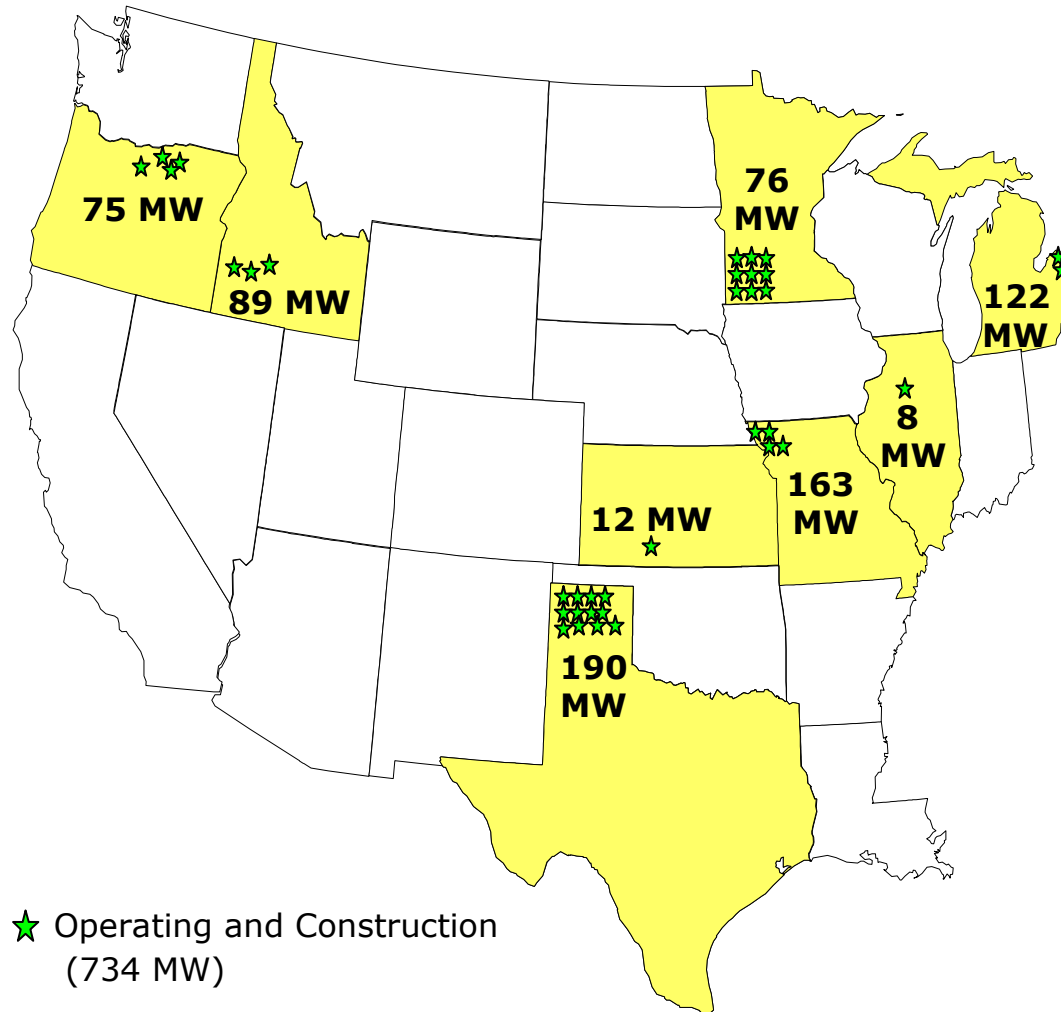
Deere's activities span the development value chain

- Siting & wind farm design
- Interconnection and utility relations
- Turbine supply and technology expertise
- Construction project management
- On-going wind farm operation



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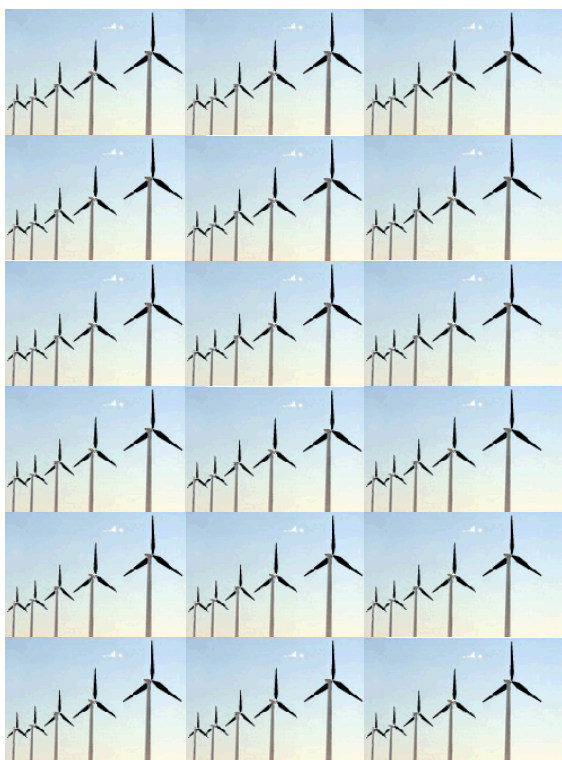
John Deere Wind Project Locations



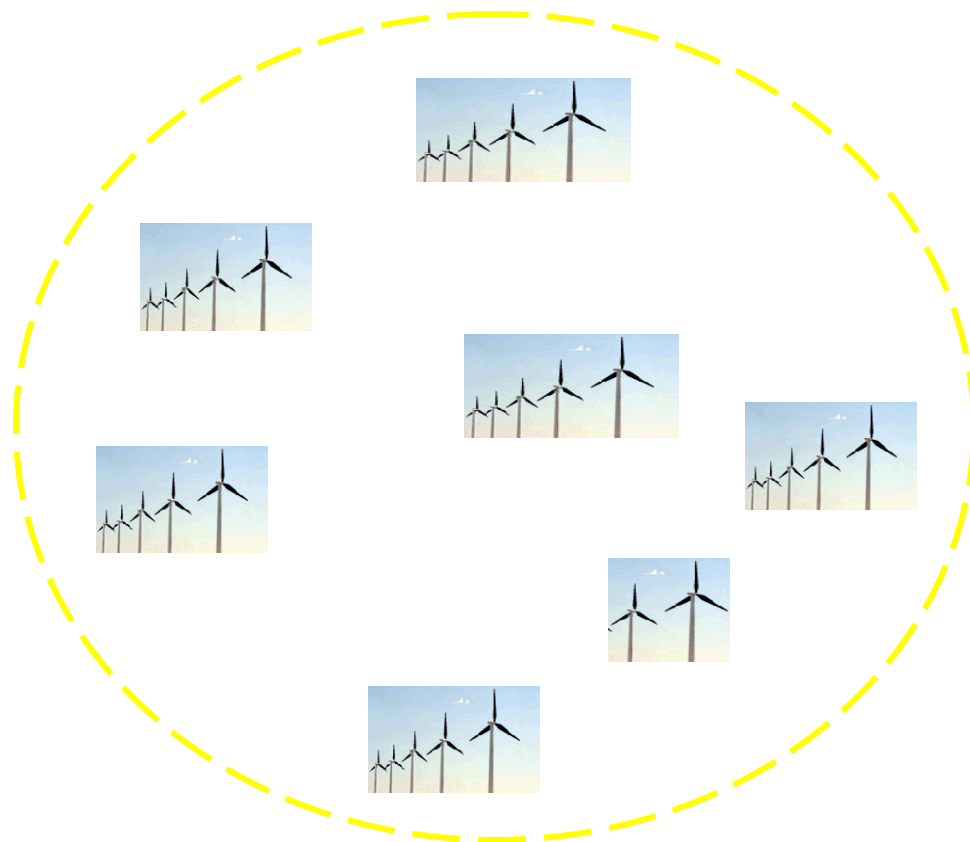
Top 5 in No. of Projects
Top 10 in No. of MW's

Current projects range in size from 2 to 80 MW

Deere's "Distributed" Wind Concept



Typical "Utility Scale" Project
> 100 MW



Deere Aggregation Model
10 – 100 MW



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Greensburg, Kansas



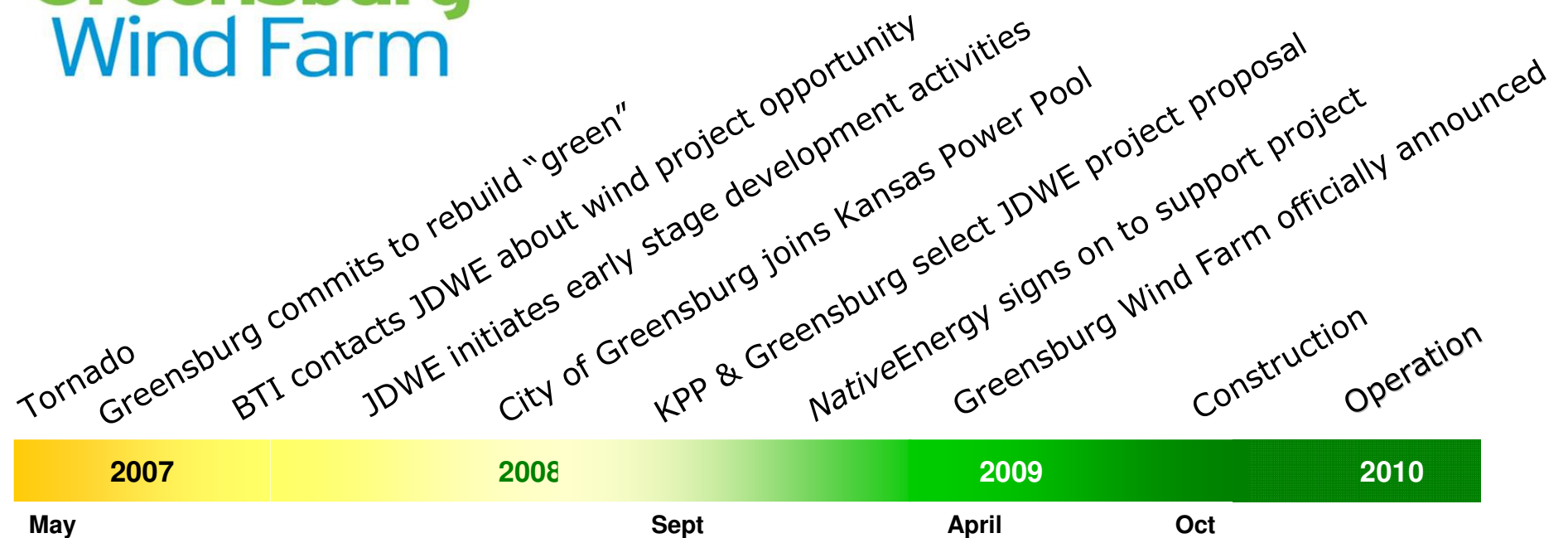
- In May 2007, Greensburg was hit by an EF5 tornado, destroying 95% of the town.
- As part of the massive rebuilding effort, the community committed to environmentally friendly, energy-efficient construction.
- Town receiving national recognition for initiative to be the first “green” city.
- Goal: City of Greensburg to be 100% powered by renewable energy.

Developing the Greensburg Wind Farm



Greensburg
Wind Farm

Project Timeline



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Wind Project Site



Project Details:

12.5 MW

10 – 1.25 MW Suzlon S-64
wind turbines

Four miles southwest of
Greensburg

Approximately 1,400 acres,
with 6 local landowners



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Greensburg Wind Farm

Project connects to
Southern Pioneer
distribution system

Power Purchase Agreement
with **Kansas Power Pool**

Renewable Energy Credits
allocated to **City of
Greensburg** to match
electric usage

NativeEnergy purchased
remaining RECs, providing
critical project revenues

Project financing through
**USDA Rural
Development**

Suzlon O&M field office
opening in Greensburg



***Allows Greensburg to meet its
green energy goal***



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Wind Farm Construction

“Language of the Land”

- Mindful of landowner interests
- Minimize impact on nature



Access roads & project facilities
located and built to minimize
impact on farming operations



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Wind Farm Construction

Foundations

Spread Footing



226 cubic yards of concrete
23,000 lbs. of steel reinforcing
160 anchor bolts, each 10' long
Excavation-to-backfill in 5 days



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Wind Farm Construction

Transportation

Hauling Superloads

10 truck loads per WTG

Blades are 140' long

Nacelle weighs 97,000 lbs.
(requires a 13-axel truck)



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Wind Farm Construction



Phase 1: Offloading, base section erection, & rotor build



Phase 2: Set upper mid, top tower section, nacelle, & fly rotor



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Wind Farm Construction



Nacelle Installation

265 foot vertical lift



Flying the Rotor

Wind speed limitation of 23 mph



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Wind Farm Construction

Electrical Work

Substation

Padmount transformers

Tower Wiring

SCADA system



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Wind Farm Operations

Enterprise SCADA & Operations Center

34 active projects - total over 600 MW



Asset Performance Optimization

- Real-time tracking of key performance & equipment indicators

Leveraging John Deere's leadership in engineering, customer service & product support

- Regional site support / service logistics



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Wind Farm Construction

End Result

Typical project
construction cost

- \$500k - \$1M per WTG
- 6 to 12 months
- 6 to 8 contractors
- 20+ years design life

➤ ***Green Energy***



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For more information:

John Deere Wind Energy 888-689-9066 www.JohnDeere.com/WindEnergy

Greensburg Wind Farm



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WIND ENERGY

SUPPORT FOR A Community

On May 4, 2007, an EF5 tornado nearly wiped Greensburg off the map. The twister leveled 95% of the community and left most of its residents homeless. As part of the community's massive rebuilding effort, Greensburg is committed to environmentally friendly, energy-efficient construction. State and federal governments, organizations, major corporations, and local businesses are supporting Greensburg by helping promote, plan and fund this green initiative.

CLEANER *Greener* POWER

John Deere Wind Energy plans to help make the community a greener place by developing the **Greensburg Wind Farm**. This project will create jobs and reduce greenhouse gas emissions. The company's contribution of Renewable Energy Credits to Greensburg will help the city achieve its green energy goal.

WHO'S ONBOARD

CITY OF GREENSBURG

When the project becomes operational, Greensburg will be able to supply 100% of the city's homes and businesses with a clean, green energy source.

KANSAS POWER POOL

Kansas Power Pool, the municipal energy agency of which Greensburg is a member, will purchase the electrical output from the wind farm.

NATIVEENERGY

A leader in climate solutions services, *NativeEnergy* is the exclusive marketer of the renewable energy credits (RECs) from the wind farm, providing critical revenues for the project. *NativeEnergy* will qualify the RECs as carbon offsets for sale to its customers.

NUTS & BOLTS

- 12.5 MW project using ten 1.25 MW turbines
- Enough energy to power ~4,000 homes
- Commercial operation expected 2010
- Wind farm to be located approximately 3 miles southwest of Greensburg



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